

# **Strengthening the implementation of biodiversity treaties through environmental law education**

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## **Abstract**

Biodiversity is vital to humanity and its continued existence cuts across rights and duties of states and their obligations pursuant to a plethora of international environmental agreements. There is a plethora of international and regional treaties focusing on biodiversity and conservation issues presently. Several Middle East-North Africa (MENA) countries have signed, ratified and in some instances, domesticated some of these treaties into their national legal systems. However, in many MENA countries, notwithstanding the avalanche of national and international mechanisms on biodiversity, several barriers are militating against the successful implementation of the regime on biodiversity in different parts of the world.

This chapter argues that reliance on environmental law education can be one of the strategies to improve the implementation of biodiversity treaties across the MENA region. Drawing salient lessons from emerging best practices on environmental law education across the region, this chapter examines the role of environmental law education in advancing biodiversity and nature conservation. It discusses legal and institutional gaps that hinder the profusion of environmental law education on biodiversity in the MENA region, and key reforms necessary to address such gaps.

## I. Introduction

This chapter argues that reliance on environmental law education can be one of the strategies to improve the implementation of biodiversity treaties in the Middle East and North Africa (MENA) region. Drawing lessons from emerging best practices on environmental law education across the region, this chapter examines the role of environmental law education in advancing biodiversity and nature conservation. It discusses legal and institutional gaps that hinder the profusion of environmental law education in the MENA region, and key reforms necessary to address such gaps.

Biodiversity is vital to humanity and its continued existence cuts across rights and duties of states and their obligations pursuant to a plethora of international environmental agreements.<sup>1</sup> Notwithstanding the avalanche of international mechanisms promoting biodiversity protection, there has been a massive decrease in biodiversity resources in many parts of the world including the MENA region.<sup>2</sup> For example, habitat loss of indigenous species within the MENA region is rising at a striking rate due to natural and human causes.<sup>3</sup> The MENA region has rich and diverse ecosystems which is currently under threat.<sup>4</sup> The 2015 IUCN Red List states that thousands of species within the MENA region are under threat arising from the decline in biodiversity sources.<sup>5</sup> Some of the factors impacting negatively on the biodiversity in MENA include desertification, droughts, climate change and wildfires amongst others.<sup>6</sup>

Hence, El Kassab argues that the decline or worsening of biodiversity in the region is connected ‘to human activities that result from government policies as well as lack of awareness of the importance of biodiversity and its role in achieving food security and the protection of natural

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<sup>1</sup> Generally, see Malgosia Fitzmaurice, Meagan S. Wong, and Joseph Crampin, *International Environmental Law: Text, Cases and Materials* (Edward Elgar Publishing, 2022)

<sup>2</sup> There are diverse conceptualisations or understandings of which countries are part of the MENA region. This chapter adopts the categorisation enunciated by Iyad Abumoghli, and Adele Goncalves ‘Environmental challenges in the MENA region’ Knowledge Repository – UNEP (UNEP 2020) <<https://wedocs.unep.org/handle/20.500.11822/31645>> accessed 20 October 2023. They state that; “There are multiple understandings concerning which countries constitute the MENA region, with no standardized definition. For this study, it is assumed to include 21 countries located in four sub-groups: the Mashreq region (Egypt, Iraq, Jordan, Lebanon, Palestine, Syria), the Maghreb region (Algeria, Libya, Morocco and Tunisia), the Gulf Cooperation Council Countries (Bahrein, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates), and a fourth cluster including Arab Least Developed Countries (Sudan, Yemen).” On the other hand, Olawuyi suggests that MENA region comprises of 20 countries. Generally, see Damilola S. Olawuyi (ed) *Climate Change Law and Policy in the Middle East and North Africa Region* (Routledge, 2021)

<sup>3</sup> Gazliya Nazimudheen, ‘Things to Know About Habitat Loss in MENA’ (EcoMENA 24 August 2022) <<https://www.ecomena.org/habitat-loss-in-mena/>> accessed 15 October 2023

<sup>4</sup> Damilola S. Olawuyi, *Environmental Law in Arab States* (Oxford University Press, 2022) 248-260.

<sup>5</sup> The IUCN Red List of Threatened Species <<https://www.iucnredlist.org/>> accessed 15 October 2023

<sup>6</sup> Generally, see Rajaa El Kassab, ‘A region in danger! Biodiversity in the Arab region’ (Policy Commons, 15 August 2022) <<https://policycommons.net/artifacts/2654130/a-region-in-danger-biodiversity/3677034/>> accessed 15 October 2023

resources.’<sup>7</sup> As a result, some countries in MENA are categorized as biodiversity hotspots and have ‘lost at least 70 percent of its primary native vegetation.’<sup>8</sup> For example, Morocco has suffered from worsening droughts and this has had negative impacts on biodiversity in the country.<sup>9</sup> This is said to exemplify the extent of the threats to biodiversity in MENA. The situation in MENA has been worsened by the negative impacts of climate change which is ‘considered one of the key drivers of biodiversity loss — intensifies, effects on the region’s wildlife, plants and other species are expected to increase.’<sup>10</sup> Furthermore, notwithstanding its substantial energy resources, the adverse or arid geographical circumstances of MENA (for example, it is one of the driest, most water-stressed, and most food insecure areas in the world) which makes it enormously susceptible to several environmental difficulties.<sup>11</sup>

Against this backdrop, halting the rapid loss of biodiversity is of paramount importance to the MENA region. There has been concerted moves by the international community and relevant stakeholders in developing measures or mechanisms to ensure the survival of biodiversity including by promoting environmental awareness and education.<sup>12</sup> Environmental education is a process or means that enjoins individuals (including students) to explore environmental and allied issues, participate in problem solving, and take action to improve and protect the environment.<sup>13</sup> Environmental education initiatives play a major role in improving environmental awareness in societies. This especially becomes of utmost importance in societies or countries that are facing the burden of environmental injustices.<sup>14</sup> Higher education institutions in the MENA region ‘can play lead roles in promoting the SDGs through courses, training, and research programs that expose students to the various legal regimes governing human relationships with the environment.’<sup>15</sup> As ASSELLMU notes:

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<sup>7</sup> *ibid* 1

<sup>8</sup> Critical Ecosystem Partnership Fund website, ‘Biodiversity Hotspots Defined’ <<https://www.cepf.net/our-work/biodiversity-hotspots/hotspots-defined>> accessed 15 October 2023

<sup>9</sup> Kira Walker, ‘MENA’s biodiversity shrinking under the pressure of climate change’ (Nature Middle East 13 December 2022) <<https://www.natureasia.com/en/nmiddleeast/article/10.1038/nmiddleeast.2022.79#:~:text=The%20rich%20biodiversity%20found%20in.and%20animal%20resources%3B%20and%20pollution>> accessed 15 October 2023

<sup>10</sup> *ibid*

<sup>11</sup> Generally, see Olawuyi ‘environmental law’ (n 4)

<sup>12</sup> Phillipe Sands and Jacqueline Peel, *Principles of International Environmental Law* (4<sup>th</sup> edn, CUP 2018) 385

<sup>13</sup> Fatima Eshun, et al, ‘A survey of the role of environmental education in biodiversity conservation in the Greater Accra Region of Ghana’ (2022) 2(2) *Conservation* 297, 298

<sup>14</sup> Generally, see Osamuyimen Enabulele and Eghosa O. Ekhaton, ‘Improving Environmental Protection in Nigeria: A Reassessment of the Role of Informal Institutions’ (2022) 13(1) *JSDLP* 162

<sup>15</sup> Association of Environmental Law Lecturers in Middle East and North African Universities, Training Manual for the Train-the-Trainers (TTT) Program in Environmental Law for Higher Education Institutions in the MENA Region (August 2021) 21 <[https://www.hbku.edu.qa/sites/default/files/train-the-trainers\\_eng.pdf](https://www.hbku.edu.qa/sites/default/files/train-the-trainers_eng.pdf)> accessed 15 October 2023

implementing holistic and comprehensive ELE courses can enhance evidence-based policy making, societal awareness, and local empowerment on environmental law and sustainability in the region, specifically on issues related to water, energy and food security, climate change, clean technology entrepreneurship and preservation of cultural heritage.<sup>16</sup>

This chapter argues that awareness and understanding of biodiversity issues should be embedded in the law curriculum via environmental law education within the MENA region. Environmental law education which is a subset or subcategory of environmental education ‘focuses on the study of the core principles of law relating to the protection of the environment.’<sup>17</sup> Environmental law education can be integrated or actualised via already existing environmental programmes offered by universities or as part of the legal education curriculum in the MENA region. In many parts of the world, scholars and other relevant stakeholders have suggested that awareness of environmental sustainability issues and climate change should be mainstreamed or embedded in the legal curriculum of educational institutions (especially universities), accordingly the MENA region should not be left out. The environment is an amalgamation of a wide-ranging and rich variety of biodiversity sources and therefore, it should be protected.

This chapter examines challenges to environmental law education on biodiversity and nature conservation in the MENA region. It examines how law students and lawyers in the MENA region could be better equipped with the requisite knowledge of the legal framework on biodiversity. The chapter is divided into five sections including the introduction. The second section discusses the role of environmental education in promoting the utility of treaties on biodiversity. The third part discusses the evolution of environmental law education in the MENA region. and the challenges to biodiversity legal education in the MENA region. The fourth section examines how those challenges can be addressed through law and policy responses. The fifth part is the concluding section.

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<sup>16</sup> *ibid*

<sup>17</sup> *ibid* 20

## II. The role of environmental education in promoting environmental awareness in MENA

Generally, education (whether in formal or informal settings) can provide the tools to enable individuals and societies to tackle the scourge of environmental crisis or degradation.<sup>18</sup> Education can have transformative impacts on how society and individuals treat or act towards their environment. This is evident in the rise of transnational litigation filed by civil society organisations against multinational corporations in different parts of the world. In some of these lawsuits, the knowledge and expertise of individuals (litigants) and organizations have had positive impacts on the business strategy and activities of MNCs.<sup>19</sup>

Education is vital for the equitable and sustainable use or consumption of biodiversity sources, and it is ‘crucial for mainstreaming biodiversity.’<sup>20</sup> Thus, within the MENA region context, environmental education can be integral as one of the tools in tackling biodiversity related negative impacts on society.

Environmental education can be traced to the mid-18<sup>th</sup> century when scholars and educators suggested that students should ‘study nature, not book.’<sup>21</sup> Thus, some scholars have suggested the early inspiration for environmental education can be traced to the works of philosophers and scholars who wrote on the utility of nature and the environment in the 18<sup>th</sup> century.<sup>22</sup> However, the term ‘environmental education’ is said to have been used first in 1948 and the activities of the various UN international conferences on the environment have given fillip to the rise of environmental education initiatives at the domestic and international levels.<sup>23</sup> Also, the United Nations Environment Programme (UNEP) and the United Nations Educational,

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<sup>18</sup> Generally, see Enabulele and Ekhaton (n 14)

<sup>19</sup> Generally, see Sufyan Droubi et al, ‘Transforming education for the just transition’ (2023) 100 *Energy Research & Social Science* 202103090.

<sup>20</sup> UNESCO website ‘Education and awareness <<https://www.unesco.org/en/biodiversity/education>> accessed 17 September 2023

<sup>21</sup> Generally, see Najib Saab, Adan Badran and Abdul-Karim Sadik, ‘Environmental Education for Sustainable Development in Arab Countries’ Annual Report of Arab Forum for Environment and Development (AFED) (Beirut, Lebanon 2019) 1 <<http://www.afedonline.org/en/reports/details/environmental-education-for-sustainable-development-in-arab-countries>> accessed 15 October 2023

<sup>22</sup> See Saab *et al* *ibid*

<sup>23</sup> Generally, see Afe Babalola and Damilola S. Olawuyi, ‘Advancing Environmental Education for Sustainable Development in Higher Education in Nigeria: Current challenges and future directions’ (2021) 13 (19) *Sustainability* 10808

Scientific and Cultural Organization (UNESCO) have also played a massive role in the spread of environmental initiatives in different parts of the world.<sup>24</sup>

At the international level, many instruments promote the use of environmental education and awareness. For example, Goal 4 of the SDGs focuses on ‘ensuring inclusive and quality education and promote lifelong opportunities for all’ by 2030. Also, Target 4.7 of SDG4 avers that ‘all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles’ by the year 2030.<sup>25</sup> Furthermore, the United Nations Educational, Scientific and Cultural Organization (UNESCO) Education for Sustainable Development (ESD) 2030 Framework recognises education for sustainable development (ESD) as an important core of quality education and an essential facilitator of the 17 SDGs.<sup>26</sup> Also, Article 6 of the United Nations Framework Convention on Climate Change (UNFCCC) 1992 acknowledges the utility of environmental education in the plethora of efforts of countries in tackling the climate change crisis. Thus, there are moves at the international and national levels in promoting environmental education at different levels of study in various parts of the world.

There are also laws and policies promoting environmental education/awareness within the MENA region. For example, the Sustainable Development Initiative in the Arab Region 2002 encourages all Arab countries to integrate environmental education at all educational levels ‘with a view to raising a new generation whose members are aware and conscious of their responsibility for environmental protection.’<sup>27</sup> Similarly, Article 7 of Qatar’s Environmental Protection Law states that ‘all authorities responsible of education shall include environmental awareness subjects in all the educational stages.’<sup>28</sup> Also, the Qatar National Vision 2030 aims to promote the development of environmentally friendly citizenry that appreciates the preservation or conservation of its natural heritage and its neighbours.<sup>29</sup> Furthermore, the

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<sup>24</sup> Generally, see Elizabeth M. Mrema and Aphrodite Smagadi, ‘The United Nations Environment Programme – promoting climate law education in the Middle East and North Africa’ in Damilola S. Olawuyi (ed) *Climate Change Law and Policy in the Middle East and North Africa Region* (Routledge 2022)

<sup>25</sup> Also, see Babalola and Olawuyi (n 23)

<sup>26</sup> UNESCO, ‘Education for Sustainable Development: Towards Achieving the SDGs’ (ESD for 2030) and its Roadmap for Implementation from 2020–2030’ <<https://unesdoc.unesco.org/ark:/48223/pf0000370215.locale=en>> accessed 17 October 2023

<sup>27</sup> League of Arab States, ‘The Sustainable Development Initiative in the Arab Region’ <[https://www.un.org/esa/sustdev/partnerships/activities\\_initiate/101202\\_sd\\_initiative\\_arab\\_region.pdf](https://www.un.org/esa/sustdev/partnerships/activities_initiate/101202_sd_initiative_arab_region.pdf)> accessed 15 October 2023

<sup>28</sup> Law No. 30 of 2002 Promulgating the Law of the Environment Protection 30/2002 <<https://www.almeezan.qa/LawPage.aspx?id=4114&language=en>> accessed 17 October 2023

<sup>29</sup> Qatar National Development Strategy 2011–2016; General Secretariat for Development Planning; Doha, Qatar, 2011. Also cited in Babalola and Olawuyi (n 23) 13

United Arab Emirates has developed its National Environmental Education and Awareness Strategy 2015–2021, whose main aim is to integrate or embed environmental education throughout its entire education stages.<sup>30</sup> Thus, laws and policies on environmental education are burgeoning within the MENA region. Arguably, this is not fully reflective in the entirety of the region.<sup>31</sup> However, scholars aver that there is a growing consciousness in environmental awareness in the educational systems within the MENA region.<sup>32</sup>

### **Evolution of Environmental Law Education**

Environmental Law is a fast growing distinct or separate legal discipline in the MENA region.<sup>33</sup> Furthermore, environmental law education is emergent in different parts of the (including the MENA region). Environmental law education is a subset or subcategory of environmental education, and its emphasis is on the study of the fundamental principles of law concerning the protection of the environment.<sup>34</sup> UNEP has also been at the forefront of developing global or international rule of law and environmental law education in different parts of the world.<sup>35</sup> This has also helped in the promotion and deepening of environmental law education initiatives in several parts of the world. Furthermore, students on environmental law programmes or courses are expected to be exposed to a plethora of legal frameworks regulating human interactions with environment. Environment law is also premised on a plethora of values, strategies, theories, assumptions, and regulatory principles.<sup>36</sup> Environmental law education also accentuates the utility or relevance of practical skills and requirements on how relevant stakeholders, including lawyers, academics, law firms, and businesses can forestall, avert, and ‘mitigate environmental liability in their operations, especially through corporate social responsibility, sustainability reporting, green supply chains and procurements, and strategic risk management.’<sup>37</sup>

In the context of biodiversity and nature conservation, environmental law education should also expose students and relevant stakeholders to the various national and international legal regimes on biodiversity and nature conservation. Furthermore, environmental law education

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<sup>30</sup> United Arab Emirates. National Environmental Education and Awareness Strategy (2021) <<https://www.moccae.gov.ae/assets/b4a14e05/national-environmental-education-and-awareness-strategy-2015-2021-en.aspx>> accessed 17 October 2023

<sup>31</sup> Generally, see Mrema and Smagadi (n 24)

<sup>32</sup> Generally, see Saab et al (n 21). However, for contrary views, see Mrema and Smagadi (n 24)

<sup>33</sup> Generally, see Train-the-Trainers (n 15); Saab et al (n 21)

<sup>34</sup> Train-the-Trainers (n 15) 20

<sup>35</sup> Train-the-Trainers (n 15); Mrema and Smagadi (n 24)

<sup>36</sup> Generally, see Stuart Bell et al, *Environmental Law* (9<sup>th</sup> edn, OUP 2017)

<sup>37</sup> Train-the-Trainers (n 15)

for biodiversity and nature conservation, should also equip relevant stakeholders in the society with the necessary tools, knowledge, and practical skills to tackle the scourge of rapid loss of biodiversity and protect nature conservation.

Furthermore, according to the Training Manual for the Train-the-Trainers (TTT) Program in Environmental Law for Higher Education Institutions in the MENA Region, the elements of environmental law education include:

- Awareness and sensitivity to the challenges facing the environment, including gaps in law and governance structures.
- Information and knowledge exchange on the local contexts, barriers and motivations to improve or maintain environmental quality, including ethics, religious, and/ or cultural values.
- The delivery of pedagogical skills to students to identify and help resolve environmental challenges, and deployment of legal solutions innovatively.
- Participation by students in activities that lead to the technical and legal resolution of environmental challenges.
- Critical thinking taught to students through application of theory, law and evidence to assess and draw conclusions.
- Legal vocation training for students through various pedagogical approaches. o Development and application of suitable pedagogical approaches, depending on contexts of environmental law education.<sup>38</sup>

In different parts of the world, there has been concerted moves to develop environmental law education or environmental law teaching as one of the tools to prepare law students and lawyers with the knowledge and expertise to deal with the myriad of environmental crisis afflicting different parts of the world. This takes more prominence against the backdrop of the negative impacts of climate change occurring in different parts of the world. Hence, today's law students and legal practitioners ought to be trained to deal with these issues.<sup>39</sup> Consequently, the overarching academic pedagogical consensus is that teaching on sustainability and environmental-related issues should be integrated into the core or compulsory law curriculum, and not just solely located in environmental law programmes or modules.<sup>40</sup>

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<sup>38</sup> Train-the-Trainers (n 15) 21-22

<sup>39</sup> Also, see Kim Bouwer et al, 'Climate Change isn't Optional': Climate Change in the Core Law Curriculum' (2023) 43 (2) *Legal Studies* 240

<sup>40</sup> Generally, see Bouwer *ibid*



The last 20 years have seen an astronomical increase in environmental law education in different parts of the world.<sup>41</sup> However, in many parts of the world, environmental law education is not compulsory for law students or fully integrated in the legal education curriculum.<sup>42</sup> This takes more prominence against the background of the current climate crisis and which the MENA region bears some of the worst impacts. Notwithstanding the impacts of climate change within the MENA region, scholars have argued there is lack of climate change awareness in the MENA region.<sup>43</sup> For example, Olawuyi argues that:

Despite the grim reality of climate change, the MENA region remains one of the least prepared regions facing it. Clear and comprehensive legal frameworks on climate change have not been so easily forthcoming in many parts of the region. Furthermore, climate change education is still at an alarming stage of infancy in the region.<sup>44</sup>

Hence, many tertiary or higher education institutions within the MENA have not integrated climate education into their curricula.<sup>45</sup> Hence, akin to many universities in different parts of the world, climate education is not integrated within the training requirements for law students and legal practitioners.<sup>46</sup> Arguably, the MENA region is no different.

According to Fowler et al, environmental law education emerged around the 1970s as a key constituent of the undergraduate law curriculum in various countries in different parts of the world.<sup>47</sup> There has also been a massive rise in the development of environmental law at the post-graduate and graduate levels in different countries. However, in some parts of world, environmental law has no place in the legal education curriculum, hence some scholars have argued that environmental law is not part of mainstream legal education and thus only a marginal component.<sup>48</sup> In the UK, environmental law is not a core or compulsory component of the undergraduate legal education curriculum and some scholars have argued that few students take up the study of environmental law due to various reasons including lack of future

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<sup>41</sup> Generally, see Mrema and Smagadi (n 24)

<sup>42</sup> Mrema and Smagadi (n 24); Rob Fowler et al., 'From 'Marginality' to 'Mainstream': The Evolution of Teaching and Learning in Environmental Law', in Amanda Kennedy et al. (eds), *Teaching and Learning in Environmental Law: Pedagogy, Methodology and Best Practice* (Edward Elgar, 2021); Bouwer et al (n 39)

<sup>43</sup> Olawuyi, 'Climate change law' (n 2); Mrema and Smagadi (n 24)

<sup>44</sup> Olawuyi. 'Climate change law' (n 2) 4

<sup>45</sup> Generally, see Olawuyi, 'climate change law' (n 2); Mrema and Smagadi (n 24)

<sup>46</sup> Generally, see Bouwer et al (39)

<sup>47</sup> Fowler et al (n 42)

<sup>48</sup> Generally, see Fowler et al (n 42); Steven Vaughan et al, 'Of Density and decline: reflections on environmental law teaching in the UK and on the co-production of environmental law scholarship' in Amanda Kennedy et al. (eds), *Teaching and Learning in Environmental Law: Pedagogy, Methodology and Best Practice* (Edward Elgar, 2021)

career prospects in the field.<sup>49</sup> Thus, there is a rapid decline in the number of students studying environmental law in UK universities.<sup>50</sup> However, there have been various suggestions made by relevant stakeholders including academics and legal associations on how to improve the study of environmental law and the need for the explicit integration of environmental law into the university legal curriculum in the United Kingdom (UK).<sup>51</sup> On the other hand, in the UK and many parts of the world, law students (and legal academics) are clamouring for the inclusion of environmental law into the university legal education curriculum.<sup>52</sup>

### **Environmental Law Education in the MENA Region**

According to Kameri-Mbote, Director, Law Division UNEP, ‘environmental law education systems are relatively at a nascent stage especially within the MENA region. Additionally, environmental law has conventionally not been taught as a core legal subject thus leading to fragmented approaches in its teaching.’<sup>53</sup> However, the last few years has seen a growing appetite for environmental law education in the MENA region.<sup>54</sup> There has been a massive rise in the number of universities offering environmental protection related topics in their curriculum in the MENA region. For example, in the 2019 report of the Arab Forum for Environment and Development (AFED) on ‘Environmental Education for Sustainable Development in Arab Countries’, conducted a survey of the 57 highest-ranked universities in the Arab region.<sup>55</sup> This survey is said to be the foremost wide-ranging review of environmental law components in schools and university curriculum in Arab countries, in view of recognising the various lacunae and suggesting strategies to improve the role of education in promoting environmental protection and implementation or enforcement of the SDGs in the region.<sup>56</sup> Some of the findings of the survey include that in the last decade, universities in Arab countries have seen a fast increase in programs or courses connected to the environment and sustainable development.<sup>57</sup> Also, the AFED report found out that, in total, 57 universities in the survey offered 221 degree courses or programmes relating to environmental issues or topics.<sup>58</sup>

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<sup>49</sup> Generally, see Vaughan *ibid*

<sup>50</sup> Generally, see Vaughan (n 48)

<sup>51</sup> For some of the suggestions see Bouwer et al (n 39)

<sup>52</sup> Generally, see Bouwer et al (n 39). Also, see Toluope, N. Ogboru, ‘Environmental Education: Moving Environmental Law from Marginality to Mainstream’ 3 *IJOLACLE* 83

<sup>53</sup> Train-the- Trainers (TTT) (n 15) 3

<sup>54</sup> Generally, see Mrema and Smagadi (n 24)

<sup>55</sup> Saab et al (n 21)

<sup>56</sup> Saab et al (n 21) 7

<sup>57</sup> Saab et al (n 21) 7

<sup>58</sup> Saab et al (n 21) 7

However, majority of the these programmes are scientific and technical degrees, which appears to take prominence over law, education, policy-related and economics programmes.<sup>59</sup>

However, there have been various initiatives that have been developed within the MENA to assist relevant stakeholders including environmental law lecturers and scholars on how to embed environmental awareness and environmental education within their curricula or practices. An example is the Training Manual for the Train-the-Trainers (TTT) Program in Environmental Law for Higher Education Institutions in the MENA Region, which was jointly organized by the UNEP and the Association of Environmental Law Lecturers in Middle East, and North African Universities (ASSELLMU).<sup>60</sup> ASSELLMU has been at the forefront of seeking to mitigate the gaps in the frameworks on environmental legal education within the MENA region.<sup>61</sup> The program also aims to enhance the pedagogy and delivery of environmental law programmes/courses within the MENA region.

Despite, the rise in domestic and regional policies, mechanisms, and laws on the environment within the MENA region, it is contended that ‘environmental law education is still at an alarming stage of infancy in the region, especially when compared to many other regions.’<sup>62</sup> Furthermore, arguably, in many parts of the MENA region, there have not been deliberate moves to integrate biodiversity awareness into environmental education. For example, there is a need for more specific and tailored workshops and TTT programs on biodiversity in the MENA region to further promote the integration of biodiversity awareness into environmental legal curricula in the various universities and higher education institutions within the MENA region. Biodiversity within the MENA is currently under serious threats, and this has become a major issue amongst governments and other relevant stakeholders in the region.<sup>63</sup> In many parts of the world, governments are developing mechanisms and legal frameworks (including ratifying relevant biodiversity treaties) to tackle the biodiversity threats and the MENA region is not left out. Furthermore, one strategy is to ‘ensure that people are conscious of biodiversity conservation is through education.’<sup>64</sup> Hence, reliance on environmental law education can be one of the strategies to improve the implementation of biodiversity treaties within the MENA region.

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<sup>59</sup> Saab et al (n 21) 75

<sup>60</sup> Train-the- Trainers (n 15)

<sup>61</sup> Train-the- Trainers (n 15)

<sup>62</sup> Train-the- Trainers (n 15) 18

<sup>63</sup> Generally, see Walker (n 9)

<sup>64</sup> Eshun (n 13) 297

The next section of the chapter focuses on the barriers militating against the successful implementation of legal education as tool to improve the implementation of biodiversity treaties within the MENA region.

### **III. Challenges to biodiversity legal education as a strategy for enhancing the implementation of biodiversity treaties in the MENA region**

There are various challenges militating against the successful integration of explicit biodiversity awareness and training into legal education within the MENA region. Some of these barriers or challenges include the marginality of environmental law in legal education in parts of the MENA region, shortage of qualified environmental law scholars and lecturers, funding and resource constraints and political crisis amongst others.

#### **A. Lack of comprehensive legislation on biodiversity and nature conservation**

In the MENA region, environmental law arguably has come to prominence and of age, and it is one of the strategies that is being used to tackle environmental challenges in the region. According to Olawuyi, all states in the region have developed primary legislation focused on environmental protection and secondary regulations focusing on various environmental issues such as wildlife, fisheries, biodiversity, and the protection of endangered species.<sup>65</sup> However, many MENA countries lack comprehensive laws relating to biodiversity and nature conservation. For example, according to the information available on the CBD website, many countries in the MENA have ratified the CBD, but they are yet to take concrete actions to implement or achieve the 2020 Aichi Biodiversity Targets.<sup>66</sup> Furthermore, regarding Jordan and its international biodiversity commitments, the CBD website states that Jordan's overall 'legislative framework is in place but still requires further development.'<sup>67</sup> Arguably, this is representative of countries in the MENA region. Thus, very few countries including the United Arab Emirates (UAE) have developed explicit legal and institutional frameworks on biodiversity and nature conservation in the MENA region.<sup>68</sup>

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<sup>65</sup> Olawuyi 'environmental' (n 4) 30. On the other hand, scholars including Joseph A. Omojolaibi and Solomon P Nathaniel, 'Assessing the potency of Environmental Regulation in maintaining Environmental Sustainability in MENA Countries: An Advanced Panel Data Estimation' 22 (3) (2022) *Journal of Public Affairs* e2526, have argued that environmental laws and regulations do not successfully improve environmental sustainability in the MENA region.

<sup>66</sup> CBD Website, 'List of Parties' < <https://www.cbd.int/information/parties.shtml> > accessed 15 October 2023

<sup>67</sup> CBD Website, 'Country Profile: Jordan- Main Details' < <https://www.cbd.int/countries/profile/?country=jo> > accessed 15 October 2023

<sup>68</sup> Generally, see United Arab Emirates Ministry of Climate Change & Environment < <https://www.moccae.gov.ae/en/knowledge-and-statistics/biodiversity.aspx> > accessed 15 October 2023

## **B. Marginality of Environmental Law Education on Biodiversity in MENA**

A major issue afflicting environmental law education is that it is not part of mainstream legal education in many parts of the world. As Fowler et al avers that ‘Marginality suggests that a subject sits at the fringes of the discipline of law, is inconsequential, and is seen as a luxury rather than an essential component of a good legal education.’<sup>69</sup> This is also exemplified in the marginality of environmental law in the legal education curriculum in MENA. Scholars and a plethora of reports and surveys have confirmed that environmental law education is peripheral and is not mainstreamed in the legal curriculum in the MENA region.<sup>70</sup> Even though, environmental education is integrated in the university curriculum in many universities in MENA, environmental law education is still lacking in many parts. Thus, as alluded to, earlier, environmental law is not a core course of study in legal education in many parts of the MENA region. For example, Ahmed Elseidi who is one of the leading environmental lawyers in Egypt suggests that “Unlike the U.S., Egypt lacks advanced legal education courses that detail environmental rights and justice, hindering citizens from understanding the severity of their country’s issues.”<sup>71</sup> This exemplifies the current state of environmental law education in some parts of the MENA region. Hence, scholars have alluded to the fact there are very few higher education institutions with specialist courses (including biodiversity and nature conservation) in the region that promote the knowledge and capacity on environmental law and related issues including sustainable development.<sup>72</sup> Furthermore, the marginal status of environmental law in the MENA region exemplifies or ensures that biodiversity awareness and nature conservation is severely lacking in legal education curricula in the region. This is also accentuated by the near absence of specialist biodiversity law courses in the MENA region.

## **C. Shortage of Biodiversity and Environmental Law Expertise in the MENA Region**

In many parts of the world (especially in MENA countries), there is a shortage of environmental law scholars, especially with expertise and focus on biodiversity and nature conservation, and

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<sup>69</sup> Fowler et al (n 42) 8

<sup>70</sup> Olawuyi ‘climate change’ (n 2); Training Manual (n 15); Saab et al (n 21)

<sup>71</sup> Generally, see Alicia Santiago, Enviro Law in Egypt: Egypt’s only Public Interest Environmental Lawyer visits Eugene’ (Eugene Weekly 29 June 2023) < <https://eugeneweekly.com/2023/06/29/enviro-law-in-egypt/#:~:text=Unlike%20the%20U.S.%2C%20Egypt%20lacks,their%20country%27s%20issues%2C%20Elseidi%20says> > accessed 15 October 2023

<sup>72</sup> Generally, see Olawuyi, ‘environmental law in Arab states’ (n 4) 30

this remains a noteworthy barrier to the teaching of the subject in the MENA region.<sup>73</sup> Thus, in MENA countries there is acute shortage of legal expertise on biodiversity and nature conservation and paucity of legal scholarship on biodiversity and nature conservation. Accordingly, this is also a reflection of the current state of environmental law teaching in the MENA region.

Furthermore, the shortage of biodiversity and environmental law expertise has negative impacts on the development of university law courses or programmes focused on biodiversity and nature conservation in the region. Therefore, impacting negatively on the promotion of biodiversity awareness in MENA countries.

#### **D. Resource Constraints**

Some of the major issues impacting on the successful implementation of environmental education initiatives in MENA are resource constraints or challenges especially regarding the teaching of environmental education/environmental law. Teaching of environmental law requires access and availability of materials. The teaching materials or resources (which includes textbooks, journal articles and course materials) on environmental education and environmental law education are mainly in English language.<sup>74</sup> In MENA, the principal language of teaching is Modern Standard Arabic (MSA) and hence some MENA educators regularly ‘struggle to access the lion’s share of available climate law teaching resources, raising the need for more translation of resources, as well as designing learning resources and platforms in Arabic, to provide greater access to learning resources on climate change law to MENA academics and students.’<sup>75</sup> Furthermore, some relevant stakeholders at a regional conference in the region have suggested that a major reason for the slow development of environmental law education in MENA is the absence of authoritative texts or books focused on environmental law in the region.<sup>76</sup> Also, there are no published books explicitly focused on biodiversity laws, nature conservation and biodiversity awareness in the MENA region.

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<sup>73</sup> Generally, see Hilary C. Bell, ‘Tackling the legally disruptive problem of climate change with disruptive legal education’ Damilola S. Olawuyi (ed) *Climate Change Law and Policy in the Middle East and North Africa Region* (Routledge, 2021)

<sup>74</sup> Also, see Bell *ibid*

<sup>75</sup> Bell (n 73) 258

<sup>76</sup> Damilola Olawuyi, ‘Conference Highlights Need to Introduce Environmental Law to Higher Education Curricula in the Middle East’ (IUCN, November 28, 2018) < <https://www.iucn.org/news/world-commission-environmental-law/201811/conference-highlights-need-introduce-environmental-law-higher-education-curricula-middle-east> > accessed 15 October 2023. However, in recent times there have been specialist books published on nature and content of environmental law by some leading including scholars in the MENA region including Professor Olawuyi.

Closely associated to this are financial constraints that limit the implementation of biodiversity education and awareness programs. In many parts of the world, governments are reducing the budgetary funds allocated for funding environmental education initiatives due to the economic and financial reasons amongst others.<sup>77</sup> For example, the COVID-19 pandemic has had negative impacts on funding of environmental projects in the MENA region.<sup>78</sup> Furthermore, due to the economic and income inequalities in the MENA, according to some scholars who have argued that this makes the MENA to be one of the most unequal regions in the world.<sup>79</sup> For example, some of the wealthiest resource-countries are found in MENA and the MENA is also home to some of the poorest countries in the world. This also have negative impacts including the disparities in the quality of university education in the MENA and hence some of the universities in the region are unable to retain and attract experts in the environmental law discipline.<sup>80</sup> Many of the existing environmental education initiatives in MENA region are majorly sponsored by international donors thereby unsustainable in the long term.<sup>81</sup>

Additionally, funding of biodiversity and nature projects including environmental law education initiatives focusing on biodiversity and allied issues are expensive.<sup>82</sup> Thus, there is acute lack of funding for environmental law education initiatives (including educational initiatives focusing on biodiversity and nature conservation awareness) in many MENA countries. Arguably, the lack of funding severely impacts on the development of biodiversity and nature conservation awareness initiatives in environmental law education in higher institutions of learning in the MENA region.

## **E. Impacts of conflict on environmental education in MENA**

The MENA region has for many years remained an epicentre of series of conflicts and wars.<sup>83</sup> The region has been affected by a plethora of recent armed conflict and examples include Yemen, Syria, Iraq, and Libya amongst others.<sup>84</sup> Conflict and instability have had negative

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<sup>77</sup> However, see Max Roser, and Esteban Ortiz-Ospina. "Financing education." *Our world in data* (2016).

<sup>78</sup> Generally, see Zainab Lokhandwala, 'The Fallout of Covid-19 on Environmental Law in the Middle East and North Africa' (2020) *Opinio Juris in Comparatione*

<sup>79</sup> Generally, see Bell (n 73)

<sup>80</sup> Generally, see Bell *ibid*

<sup>81</sup> Generally, Saab et al (n 21)

<sup>82</sup> Generally, see World Bank, 'Sustainable Land Management and Restoration in the Middle Est and North Africa Region: Issues, Challenges, and Recommendations' (2019) <

<https://elibrary.worldbank.org/doi/abs/10.1596/33037> > accessed 15 October 2023

<sup>83</sup> Hadi B. Heidarlou et al, 'Armed conflict and land-use changes: Insights from Iraq-Iran war in Zagros forests, (2020) 118 *Forest Policy and Economics*, 102246.

<sup>84</sup> Beatriz DeQuero-Navarro et al, 'From Conflict to Cooperation: A Macromarketing View of Sustainable and Inclusive Development in Lebanon and the Middle East' (2020) 66 (2) *Environmental Management* 232

impacts on education (including environmental education) in parts of the MENA.<sup>85</sup> This poses tremendous challenges for educators and students who can end up displaced and unable to access education sites, safely access educational materials and thus will not be able to engage in face-to-face education activities.<sup>86</sup> Accordingly, conflict in parts of the MENA is one of the major barriers impacting negatively on the implementation of environmental law education (including educational measures focused on biodiversity and nature conservation) initiatives and policies in the region. Furthermore, a plethora of relevant stakeholders including academics have blamed the lack of biodiversity and nature conservation research in the MENA region on conflict, poverty, wars, and economic woes affecting some countries in the region.<sup>87</sup> Thus, governments in the region are prioritising human needs and fighting poverty rather than developing educational initiatives on biodiversity and nature conservation.<sup>88</sup> For example, in Iran, Jowkar et al suggests that in the last two decades, environmental protection appears not to be a pressing issue by the government because the government is finding it difficult to meet the economic expectations of its citizens.<sup>89</sup> Thus, in some parts of the MENA region, environmental education (including biodiversity and nature conservation awareness) has been negatively impacted by socio-political factors.

#### **IV. Strengthening environmental law education on biodiversity in the MENA region: recommendations**

Environmental law education can be one of the integral tools or strategies in strengthening the implementation of biodiversity treaties in the MENA region. Some of the recommendations that will be analysed in this section of the chapter include mitigating the marginality of environmental law education on biodiversity, integration or embedding of biodiversity awareness in environmental law education, capacity building of environmental law academics, improved funding of environmental education initiatives in the MENA and biodiversity litigation as tool for the implementation of biodiversity treaties.

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<sup>85</sup> Generally, see Bell (n 73) and Saab (n 21)

<sup>86</sup> Bell (n 73)

<sup>87</sup> Walker (n 9)

<sup>88</sup> Generally, see Walker (n 9)

<sup>89</sup> Houman Jowkar et al 'The Conservation of Biodiversity in Iran: Threats, Challenges and Hopes' 49 (6) (2016) *Iranian Studies* 1065-1077.



## **A. Comprehensive national policy and legislation on biodiversity and nature conservation**

It is essential that MENA countries enact comprehensive laws and regulations for biodiversity and nature conservation issues to provide clear framework for the implementation, monitoring and enforcement of biodiversity and natural conservation and allied issues.<sup>90</sup> Thus, governments in the MENA region need to implement or create ‘dedicated action plans to halt and reverse the loss of critical habitats and species, enhance water management practices and conserve vital freshwater, and mainstream sustainability and conservation in key social and economic activities.’<sup>91</sup> Furthermore, MENA countries can take inspiration from the actions and strategies enshrined in the UAE’s framework on biodiversity and nature conservation. For example, the UAE has a comprehensive framework on biodiversity and nature conservation.<sup>92</sup> The UAE has signed and in some cases, ratified various international treaties and mechanisms focusing on biodiversity and nature conservation including the CBD, the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, United Nations Convention to Combat Desertification and the Ramsar Convention on Wetlands amongst others.<sup>93</sup> Furthermore, the UAE has a plethora of action plans on biodiversity and nature conservation including the National Biodiversity Strategy 2014-2021.<sup>94</sup> Thus, UAE can be an inspiration to other MENA countries on how to develop a comprehensive legal framework on biodiversity and nature conservation.

## **B. Mitigating the marginality of environmental law education in the MENA**

Generally, it should be noted that because environmental law is not a core component of legal education curriculum does not necessarily mean that such courses will not have students or academics conducting research on it. For example, in North America and parts of Europe, notwithstanding the elective or non-core status of environmental law, it is quite popular and has a firm place in legal curriculum with large numbers of students.<sup>95</sup> In several developing

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<sup>90</sup> Also, see Olawuyi ‘climate change’ (n 2) 12

<sup>91</sup> PwC Middle Est, Nature & Biodiversity: Creating a nature positive future (2023) < <https://www.pwc.com/m1/en/publications/nature-biodiversity.html> > accessed 15 October 2023

<sup>92</sup> Generally, see the United Arab Emirates Ministry of Climate Change & Environment, ‘A Guide to Biodiversity Conservation in the UAE’ (May 2023)

<sup>93</sup> Ibid. Also, see the CBD website, ‘United Arab Emirates – Main Details’ < <https://www.cbd.int/countries/profile/?country=ae#:~:text=In%20addition%2C%20the%20UAE%20has,by%20%E2%80%9CEmirates%20vision%202021%E2%80%9D.> > accessed 15 October 2023

<sup>94</sup> United Arab Emirates Ministry of Climate Change and Environment website, ‘Biodiversity’ < <https://www.moccae.gov.ae/en/knowledge-and-statistics/biodiversity.aspx> > accessed 15 October 2023

<sup>95</sup> Generally, see Fowler et al (n 42)

countries, notwithstanding the elective status of environmental law in the legal curriculum, environmental lawyers, and activists have used their expertise of environmental law as means of engaging in social change.<sup>96</sup> Thus, in the context of MENA, environmental law (incorporating biodiversity and nature conservation) should be fully integrated and made a core component of the legal curriculum in the region. This is akin to the move taking place in some developing countries. Therefore, in some developing countries including Indonesia, Philippines, India and China, environmental law is moving to becoming a mandatory or core aspect of the undergraduate legal curriculum.<sup>97</sup> Mainstreaming environmental law is a key strategy that can be used in promoting environmental law education and this will have positive impacts on enhancing environmental including biodiversity and nature conservation awareness in the MENA region. This is arguably in-line with the AFED report on environmental education in MENA, that there is an urgent need to reinforce topics including environmental law in legal education curriculum in the MENA region.<sup>98</sup> Thus, this will help bring to the fore, the relevance or utility of biodiversity awareness and nature conservation in environmental law education in the MENA region.

## **B. Embedding Biodiversity Awareness in Environmental Law Education in MENA**

Awareness and understanding of biodiversity issues should be embedded in the law curriculum in the MENA region. For example, this can be done via already existing environmental programmes offered by universities or as part of the legal education curriculum in the MENA region. Akin to what Bouwer has termed as ‘climate consciousness’ in legal practice,<sup>99</sup> there should be explicit embedding or integration of biodiversity consciousness or awareness into the legal education curriculum in universities or higher education institutions and in legal practice (especially environmental law practice) in the MENA region. According to Preston, ‘Climate change places a responsibility on lawyers to adopt a climate conscious rather than a climate blind approach in their daily legal practice. A climate conscious approach requires an

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<sup>96</sup> Amanda Kennedy et al. (eds), *Teaching and Learning in Environmental Law: Pedagogy, Methodology and Best Practice* (Edward Elgar, 2021)

<sup>97</sup> Fowler et al (n 42) 11

<sup>98</sup> Saab et al (n 21) 13

<sup>99</sup> Kim Bouwer ‘Climate consciousness in daily legal practice’ (Journal of Environmental Law Blog, 22 May 2015) <[https://blog.oup.com/2015/05/climate-consciousness-daily-legal-practice/?utm\\_source=feedblitz&utm\\_medium=FeedBlitzRss&utm\\_campaign=oupblog](https://blog.oup.com/2015/05/climate-consciousness-daily-legal-practice/?utm_source=feedblitz&utm_medium=FeedBlitzRss&utm_campaign=oupblog)> accessed 15 October 2023; Brian Preston ‘Climate conscious lawyering: implementing a climate conscious approach in daily legal practice’ (2021) 95 *Australian Law Journal* 51

active awareness of the reality of climate change and how it interacts with daily legal problems.’<sup>100</sup> Hence, due to the severe nature of biodiversity threats in the MENA, the legal education curriculum and the training of lawyers should be totally revamped to contain explicit allusions to the utility of international and national legal frameworks on biodiversity, practices, principles, and awareness of biodiversity issues. Arguably, this can play a positive role in the development of legal strategies to help tackle the source of biodiversity threats in the MENA region. Thus, promoting the effectiveness and the implementation of biodiversity treaties in MENA and will enhance the various measures developed to tackle the source of the biodiversity threats in the MENA region.

Furthermore, many laws and policies have been developed in MENA for the protection and conservation of biodiversity sources. Thus, law students and lawyers in the MENA region should be supported via environmental law education to understand the implications of these laws and policies and their impacts in the MENA region. Furthermore, students in the MENA via biodiversity awareness in environmental law education will be able to understand that the international conventions on biodiversity are legal mechanisms that creates obligations on countries that have ratified the conventions. Thus, countries that have ratified such treaties are expected to adapt their legal frameworks or laws to ensure that all the commitments arising from the international treaties or conventions are met locally.<sup>101</sup> Arguably, awareness or knowledge of the legal implications of biodiversity treaties ‘provides the student with a standpoint from which to critically assess the behaviour of governments, parliaments, authorities, and businesses’<sup>102</sup> regarding the implementation of biodiversity treaties in the MENA region. Furthermore, by virtue of Article 27 of the Vienna Convention on the Law of Treaties, contracting parties or countries to treaties cannot rely based on its national laws as reasons or justification for not respecting its expected obligations or commitments under such treaties. Thus, MENA countries should adhere to the various obligations arising from the plethora of international conventions relating to biodiversity and nature conservation and other allied issues, that they have signed and ratified.

Awareness of the legal frameworks on biodiversity is not enough; the society (especially lawyers and university law students) in the MENA region, should also develop a deep understanding of how biodiversity will be influenced and shaped by society’s response to

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<sup>100</sup> Preston *ibid* 51

<sup>101</sup> Generally, see Droubi (n 19)

<sup>102</sup> Droubi (n 19) 7

biodiversity threats in the region.<sup>103</sup> This will arguably lead to improving of the skillsets or expertise of lawyers regarding biodiversity awareness or biodiversity related issues in the MENA region.

Furthermore, according to Hulme, international conventions relating to biodiversity issues or ‘nature conservation treaties include mandatory obligations to conduct conservation training and education.’<sup>104</sup> For example, Article 27 (1) of the World Heritage Convention (WHC) 1972 explicitly accentuates the relevance of states engaging in the awareness of natural heritage issues to ‘strengthen appreciation and respect by their peoples.’<sup>105</sup> This arguably serves as a mobilisation tool for the society to support and value its conservation and natural heritage protection.<sup>106</sup>

This chapter adopts the view of Lavey<sup>107</sup> on the utility of climate change education integration into law school curriculum and this is also applicable to biodiversity awareness expected from environmental lawyers within the MENA region. Thus, Lavey suggests that effective lawyering premised on the knowledge and skills, and understanding the various risks from the undulating environmental conditions should underpin legal education.<sup>108</sup>

Furthermore, in the context of biodiversity and nature conservation, effective lawyering should also be underpinned by knowledge and awareness of the biodiversity and nature conservation issues in the MENA region. Hence, the legal practitioners in the MENA should be at the forefront of biodiversity consciousness or awareness in their legal practice in the MENA region. Additionally, UNESCO avers that ‘Education is essential for the sustainable and equitable use of biodiversity and its conservation. It is also crucial for mainstreaming biodiversity.’<sup>109</sup> Thus, environmental education is essential to actualising the SDGs (especially

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<sup>103</sup> Generally, see Bouwer (n 99) for analysis of the utility of a climate consciousness approach from a UK perspective.

<sup>104</sup> Karen Hulme, ‘Using International Environmental Law to Enhance Biodiversity and Nature Conservation during armed conflict’ (2022) 20 (5) JICJ 1155, 1173. Also, Hulme *ibid* states that Article 12 and 13(a) CBD; Article 3(3) Bern Convention; Article 5(e), 22(c), 23, 27–28 WHC; Article 4(5) Ramsar Convention provide for environmental education in their provisions.

<sup>105</sup> Generally, see Articles 27 and 28 of the WHC which focuses on environmental education. Furthermore, the recognition of education as a strategy to enhance knowledge and awareness about biodiversity is explicitly acknowledged by the CBD.

<sup>106</sup> Generally, see Hulme (n 104)

<sup>107</sup> Warren G. Lavey ‘Toolkit for integrating Climate Change into Ten High-enrollment Law School Courses’ (2019) 49 Environmental Law 513

<sup>108</sup> *ibid* 515 - 516

<sup>109</sup> UNESCO, ‘Biodiversity: Education and Awareness’ (20 December 2022) < <https://www.unesco.org/en/biodiversity/education> > accessed 15 October 2023

Goal 15) in the MENA region.<sup>110</sup> Furthermore, leading scholars on environmental law in MENA at a conference in 2018 advocated for the explicit integration of environmental law (which also includes biodiversity and nature conservation) in the higher education curricula in the region.<sup>111</sup>

### **C. Capacity building of environmental law academics**

Different initiatives have been developed in the MENA region to mitigate the shortage environmental law scholars, improving skillsets of academics and various stakeholders including UNEP and the Association of Environmental Law Lecturers in Middle East and North African Universities (ASSELLMU).<sup>112</sup> For example, UNEP in collaboration with various stakeholders have played a crucial role in the expansion of international environmental law and principles and has supported different countries in developing and enhancing capacities or expertise in environmental law.<sup>113</sup> Regarding environmental law education, UNEP has supported various initiatives to develop environmental law education in different parts of the world including Africa, Asia and MENA regions amongst others.<sup>114</sup> For example, UNEP in collaboration with Professor Olawuyi was instrumental in the creation of the ASSELLMU in 2018. The ASSELLMU is a professional network of environmental law scholars and one of its major objectives is conducting research on practice and implementation of environmental law in the region.<sup>115</sup> Since its inception, the ASSELLMU has organised several conferences and these conferences have served as avenues or platforms of bringing environmental law teachers, practitioners, lawyers, and trainers to exchange knowledge from each other.<sup>116</sup>

As one of the strategies of improving the skillsets of environmental law scholars and teachers in the region, ASSELLMU has also organized a series of events and developed teaching of environmental law toolkits. For example, the Training Manual for the Train-the-Trainers (TTT)

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<sup>110</sup> SDG Resources for Educators – Life on Land <<https://en.unesco.org/themes/education/sdgs/material/15>> accessed 15 October 2023. Furthermore, this resource further states that “Biodiversity education contributes to integrating protective ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.”

<sup>111</sup> Damilola Olawuyi, ‘Conference Highlights Need to Introduce Environmental Law to Higher Education Curricula in the Middle East’ (IUCN, November 28, 2018) <https://www.iucn.org/news/world-commission-environmental-law/201811/conference-highlights-need-introduce-environmental-law-higher-education-curricula-middle-east>

<sup>112</sup> Generally, Mrema and Smagadi (n 24)

<sup>113</sup> Mrema and Smagadi (n 24) 30

<sup>114</sup> Generally, see Fowler et al (n 42)

<sup>115</sup> ASSELLMU website, ‘About Us’, <<https://assellmu.org/about-us/>> accessed 15 October 2023

<sup>116</sup> *ibid*

Program in Environmental Law for Higher Education Institutions in the MENA Region’, which was jointly organized by the UNEP and the Association of Environmental Law Lecturers in Middle East, and North African Universities (ASSELLMU).<sup>117</sup> This training programme was developed to support academics conducting research or teaching environmental law related courses or programmes in the MENA region. Furthermore, the ‘overarching objective of this TTT Programme is to enhance the technical capacity for environmental law education in MENA universities through an in-depth exploration of innovative approaches for curriculum design, teaching pedagogies, and student assessment.’<sup>118</sup> Thus, regular occurrence of this and similar capacity training events will continually improve the skillsets of environmental law scholars and arguably help in mitigating shortage of environmental law experts in the region. Additionally, specialist training should be organised for environmental law scholars and lawyers to enhance their knowledge and pedagogy relating to biodiversity law and awareness and nature conservation in the MENA region. For example, ASSELLMU, UNEP and other relevant stakeholders should explicitly embed the knowledge of biodiversity laws and awareness, and nature conservation issues in their training courses. These training courses should be organised for environmental scholars, lawyers, and policy makers in the MENA region to deepen their knowledge or understanding of biodiversity and nature conservation issues. Furthermore, continuous training of environmental law teachers, researchers and academics will enhance the delivery of environmental law education programmes in universities in the MENA region.

#### **D. Improved funding of environmental education initiatives in the MENA**

There is a need for increased funding of ASSELLMU and other similar environmental education (including biodiversity and nature conservation) initiatives in the MENA region. Funding of environmental education initiatives and environmental programmes is said to be on the decline in several states in the MENA region.<sup>119</sup> The number of environmental initiatives is on the rise in the MENA, and this needs increased funding from the government and other relevant stakeholders for these initiatives to be successfully implemented. Hence, AFED report suggests that financial resources ought to ‘be raised independently of international donors in order to enhance both the quality and evidence base of environmental topics.’<sup>120</sup> Furthermore, richer MENA countries including Saudi Arabia and the UAE have an integral role to play by

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<sup>117</sup> Train-the-Trainers (n 15)

<sup>118</sup> Train-the-Trainers (n 15)

<sup>119</sup> Generally, see Saab et al (n 21)

<sup>120</sup> Saab et al (n 21) 9

funding environmental education initiatives (including those focused on biodiversity and nature conservation) in other MENA countries.

### **E. Mitigating impacts of conflicts on environmental education initiatives**

The movement to online teaching and use of technology can be some of the ways of improving access to environmental education by students during conflicts in the MENA region. Thus, online learning platforms can serve as lifeline for students in MENA, whose education has been negatively impacted by the conflict.<sup>121</sup> Consequently, this requires reliance on technology and if the computer network is able to cope with the demands and if the students affected by conflict can get online, they can potentially access education.<sup>122</sup> The COVID-19 has shown the world (especially the education sector) that online learning platforms can serve as good alternative to face-to-face teaching and many schools and universities have fully embraced the technology to enable access to education and its resources, during and even after the COVID-19 pandemic including in the MENA region.

Furthermore, the reliance on online teaching and use of technology can improve access and open more opportunities for environmental law education focusing on biodiversity and nature conservation awareness in the region. For example, more people can be trained through online or virtual learning platforms on the utility of biodiversity and nature conservation awareness in the MENA region. Also, various online tools such as videos, e-learning tools and other educational technology resources can enhance the quality of the learning and teaching of biodiversity and nature conservation issues in the region.<sup>123</sup>

### **F. Biodiversity Litigation as a tool for the implementation of Biodiversity Treaties in MENA**

Due to the failings and weaknesses of domestic and international regulatory mechanisms in different parts of the world, the use of litigation is now being regularly relied upon by individuals, victims, and other relevant stakeholders in holding governments, multinational corporations, and other entities accountable for their actions in different parts of the world.<sup>124</sup>

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<sup>121</sup> Generally, see Bell (n 73)

<sup>122</sup> Bell (n 73) 258

<sup>123</sup> Also, see Bell (n 73) for similar allusions in the context of climate change education in MENA countries.

<sup>124</sup> Rhuks Ako and Eghosa O. Ekhaton, 'The civil society and the regulation of the extractive industry in Nigeria' (2016) 7 (1) *JSDLP* 183

For example, due to the existing weaknesses in the global climate governance regime, climate litigation has become a popular strategy or mechanism utilised by climate change victims and their representatives in various jurisdictions in both the developing and developed countries in holding multinationals and states accountable for climate inaction.<sup>125</sup> Arguably, due to the impact of climate litigation at the national levels and international levels, some scholars have argued for the development of biodiversity litigation as one strategy that can be relied upon to enhance the implementation of the various biodiversity conventions at the domestic level.<sup>126</sup>

There are different definitions and conceptualisations of biodiversity litigation.<sup>127</sup> However, this chapter adopts the definition by Futhazar et al<sup>128</sup> and they define biodiversity litigation as ‘any legal dispute at the national, regional or international level that concerns conservation of sustainable use of and access and benefit-sharing to genetic resources, species, ecosystem and their relations.’

There is potential or possibility of biodiversity litigation to hold governments accountable for their international biodiversity commitments within MENA. Successful biodiversity litigation has taken place in other developing countries including India, Brazil, and Tanzania amongst others.<sup>129</sup> However, biodiversity litigation remains largely untested in the MENA region. Environmental biodiversity awareness can improve the knowledge or expertise of litigants and other relevant stakeholders in successfully exploring the potential of biodiversity litigation to seek redress for landscape alteration and habitat degradation resulting from development activities and projects in the MENA region. Reliance on litigation as a legal strategy has achieved some success in transnational human rights litigation instituted against MNCs and governments in different parts of the world.<sup>130</sup> Successful litigation can have positive impacts

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<sup>125</sup> See, Pedi Obani and Eghosa Ekhaton, ‘Transnational Litigation and Climate Change in Nigeria’ in Symposium: Nigeria and International Law: Past, Present and the Future (AfronomicsLaw Blog 2021) < <https://www.afronomicslaw.org/category/analysis/transnational-litigation-and-climate-change-nigeria> > accessed 15 October 2023.

<sup>126</sup> Generally, see Guillaume Futhazar, Sandrine Maljean-Dubois, and Jona Razzaque (eds) *Biodiversity Litigation* (OUP 2022)

<sup>127</sup> Generally, see Clyde & Co website, Biodiversity litigation: Environment analysis’ (12 April 2022) < <https://www.clydeco.com/en/insights/2022/04/biodiversity-litigation-environment-analysis> > accessed 15 October 2023

<sup>128</sup> Futhazar et al (n 126) 15

<sup>129</sup> Boya Jiang, ‘10 Landmark Cases for Biodiversity’ (ClientEarth China 11 October 2021) < <https://www.clientearth.org/latest/documents/10-landmark-cases-for-biodiversity/> > accessed 15 October 2023.

<sup>130</sup> Generally, see Ako and Ekhaton (n 124)



on the regulation of different sectors or industries in countries.<sup>131</sup> Thus, successful biodiversity litigation could strengthen the implementation of biodiversity treaties in the MENA region.<sup>132</sup>

## **V. Conclusion**

Various international and regional instruments and policies have underscored the importance of environmental education in advancing biodiversity and nature conservation. In the MENA region, there has been an increase in the number of environmental education initiatives, however, environmental law education (including initiatives on biodiversity and nature conservation) is still at the fringes of the university curriculum in the region.

This chapter has undertaken a critical analysis of the current state of environmental law education in the MENA region. Notwithstanding the marginal status of environmental law education in several countries in the region, it can serve as one of the strategies to strengthen the implementation of the plethora of biodiversity treaties in the region. Several recommendations are made in this chapter on how to improve the status of environmental law education in the region and these measures can also be replicated in other developing countries as well. The recommendations include mitigating the marginality of environmental law education, embedding biodiversity awareness in environmental law education, capacity building of environmental law academics, improved funding of environmental education initiatives, mitigating the impacts of conflicts on environmental education initiatives and the utility of biodiversity litigation. Arguably, the implementation of these recommendations which are premised on environmental law education in MENA countries will enhance and localise the implementation of biodiversity treaties in the region.

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<sup>131</sup> Generally, see Ako and Ekhaton (n 124)

<sup>132</sup> Also, see Rob Fowler, 'The Role of the IUCN Academy of Environmental Law in Promoting the Teaching of Environmental Law' (2017) 8 IUCNAEL e-Journal <<https://www.iucnael.org/en/academy-journal/previous-issues/86-journal/issue/640-issue-2017>> accessed 15 October 2023